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10/674,040	09/29/2003	Durga Prasad Malladi	030245	2580

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EXAMINER	
NGUYEN, KHAI MINH	
ART UNIT	**PAPER NUMBER**
2687	

DATE MAILED: 02/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/674,040	MALLADI ET AL.	
	Examiner	Art Unit	
	Khai M. Nguyen	2687	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 November 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-12,14-18,20-30,32 and 33* is/are pending in the application.

4a) Of the above claim(s) *2,13,19 and 31* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,5-12,14,16-18,20,22-30 and 32* is/are rejected.

7)☒ Claim(s) *4,15,21 and 33* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This is in response to the Applicant's amendments and arguments filed on November 30, 2005 in which claims 1-33 have been amended. Claims 1, 3-12, 14-18, 20-30, and 32-33 are currently pending.

Response to Arguments

2. Applicant's arguments with respect to claims 1, 3-12, 14-18, 20-30, and 32-33 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims **1, 3, 5-12, 14, 16-18, 20, 22-30, and 32** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jung (U.S.Pat-6049716) in view of TIA/EIA (ANSI/TIA/EIA-95-B-1999).

Regarding claim 1, Jung teaches a wireless communication system (fig.2, col.3, lines 11- 15) comprising:

a network (fig.1-2 col.3, lines 11-15);

a first base station coupled to the network (fig.1-2, col.2, lines 3-15); and

a mobile station coupled to the base station via a wireless communication link (fig.1-2, col.2, lines 3-15, *mobile station transmits the strength measurement message (PSMM) signal to base station*);

wherein the network is configured to direct the mobile station to enter or leave soft handoff status (fig.1-3, col.3, lines 11-67); and

wherein the mobile station is configured to modify a set of transmission parameters in response to the network directing the mobile station to enter or leave soft handoff (fig.1-3, col.2, line 3 to col.3, line 67).

Jung fails to specifically discloses the transmission parameter comprises a frame size, wherein if the mobile station is directed to enter soft handoff, the frame size is set to a first size and wherein if the mobile station is directed to leave soft handoff, the frame size is set to a second size. However, TIA/EIA teaches the transmission parameter comprises a frame size (page 7-301 to page 7-307), wherein if the mobile station is directed to enter soft handoff, the frame size is set to a first size (page 7-133, lines 24-32) and wherein if the mobile station is directed to leave soft handoff, the frame size is set to a second size (page 7-133, lines 24-32). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the transmission parameter comprises a frame size, wherein if the mobile station is directed to enter soft handoff, the frame size is set to a first size and wherein if the mobile station is directed to leave soft handoff, the frame size is set to a second size as taught by

TIA/EIA with Jung teaching in order to reducing the number of soft handoff can lessen the system load and the possibility of handoff in the middle of the target cell it can get an effect of handoff efficiency and raise communication quality.

Regarding claim 3, Jung and TIA/EIA further teaches a wireless communication system as recited in claim 1, wherein the first size is greater than the second size (see Jung, col.1, line 55 to col.2, line 19, see TIA/EIA, page 7-133, lines 24-32).

Regarding claim 5, Jung further teaches a wireless communication system as recited in claim 1, wherein the mobile station is configured to measure a pilot signal strength for each of one or more base stations (fig.1-3, 6, col.2, line 3 to col.3, line 67) wherein the one or more base stations include the first base station (fig.1-3, 6) and to periodically transmit one or more pilot strength measurement messages to the network (fig.1-3, 6, col.2, line 3 to col.3, line 67).

Regarding claim 6, Jung further teaches a wireless communication system as recited in claim 5, wherein the network is configured to identify a change in a number of base stations in an active set for the mobile station based on the pilot strength measurement messages (fig.1-3, 6, col.1, line 47 to col.2, line 48) and to direct the

mobile station to enter or leave soft handoff based on the change in the number of base stations in the active set (fig.1-3, 6, col.1, line 47 to col.2, line 48).

Regarding claim 7, Jung further teaches a wireless communication system as recited in claim 6, wherein the network is configured to direct the mobile station to enter or leave soft handoff by sending a handoff direction message (HDM) to the mobile station (fig.1-3, 6, col.1, lines 36-65, col.5, lines 35-67).

Regarding claim 8, Jung further teaches a wireless communication system as recited in claim 7, wherein the mobile station is configured to modify the transmission parameter in response to receiving the HDM from the network (fig.1-3, 6, col.2, line 3 to col.3, line 67).

Regarding claim 9, Jung further teaches a wireless communication system as recited in claim 8, wherein the mobile station is configured to transmit a handoff completion message to the network after receiving the HDM (fig.1-3, 6, col.2, line 3 to col.3, line 67).

Regarding claim 10, Jung teaches a mobile station configured to operate in a wireless communication system (fig.1-3) comprising:

a processing subsystem (fig.1-3, col.2, line 42 to col.3, line 3); and

a transceiver subsystem (fig.1-3, col.3, line 42 to col.3, line 3);

wherein the processing subsystem is configured to set a transmission parameter for the transceiver subsystem in response to detecting that the mobile station is entering or leaving soft handoff (fig.1-3, col.2, line 3 to col.3, line 67).

Jung fails to specifically discloses the transmission parameter comprises frame size. However, TIA/EIA teaches the transmission parameter comprises a frame size (page 7-133, lines 24-32). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the transmission parameter comprises a frame size as taught by TIA/EIA with Jung teaching in order to reducing the number of soft handoff can lessen the system load and the possibility of handoff in the middle of the target cell it can get an effect of handoff efficiency and raise communication quality.

Regarding claim 11, Jung further teaches a mobile station as recited in claim 10, wherein the processing subsystem is configured to detect that the mobile station is entering or leaving soft handoff based upon a received handoff direction message (HDM) (fig.1-3, 6, col.2, line 3 to col.3, line 67).

Regarding claim 12, Jung further teaches a mobile station as recited in claim 11, wherein the processing subsystem is configured to set the transmission parameter to a first value if the HDM directs the mobile station to enter soft handoff (fig.1-3, 6, col.2, line 3 to col.3, line 67), and to set the transmission parameter to a second value if the HDM directs the mobile station to leave soft handoff (fig.1-4, 6, col.4, line 48 to col.5, line 12).

Regarding claim 14, Jung and TIA/EIA further teaches a mobile station as recited in claim 12, wherein the first value is greater than the second value (see Jung, col.1, line 55 to col.2, line 19, see TIA/EIA, page 7-133, lines 24-32).

Regarding claim 16, Jung further teaches a mobile station as recited in claim 11, further comprising measuring a pilot signal strength for each of one or more base stations and periodically transmitting one or more pilot strength measurement messages to a network connected to the base stations (fig.1-3, 6, col.2, line 3 to col.3, line 67).

Regarding claim 17, Jung further teaches a mobile station as recited in claim 16, further comprising transmitting a handoff completion message to the network after receiving the HDM (fig.1-3, 6, col.1, lines 36-65, col.5, lines 35-67).

Regarding claim 18, Jung teaches a method implemented in a wireless communication system (fig.1-3) comprising:

detecting a mobile station entering or leaving soft handoff (fig.1-3, abstract, col.1, lines 36-65); and

modifying a transmission parameter for the mobile station in response to detecting the mobile station entering or leaving soft handoff (fig.1-3, col.1, line 36 to col.2, line 19).

Jung fails to specifically discloses the transmission parameter comprises a frame size, wherein if the mobile station is directed to enter soft handoff, the frame size is set to a first size and wherein if the mobile station is directed to leave soft handoff, the frame size is set to a second size. However, TIA/EIA teaches the transmission parameter comprises a frame size (page 7-301 to page 7-307), wherein if the mobile station is directed to enter soft handoff, the frame size is set to a first size (page 7-133, lines 24-32) and wherein if the mobile station is directed to leave soft handoff, the frame size is set to a second size (page 7-133, lines 24-32). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the transmission parameter comprises a frame size, wherein if the mobile station is directed

to enter soft handoff, the frame size is set to a first size and wherein if the mobile station is directed to leave soft handoff, the frame size is set to a second size as taught by TIA/EIA with Jung teaching in order to reducing the number of soft handoff can lessen the system load and the possibility of handoff in the middle of the target cell it can get an effect of handoff efficiency and raise communication quality.

Regarding claim 20, Jung and TIA/EIA further teaches a wireless communication system as recited in claim 18, wherein the first size is greater than the second size (see Jung, col.1, line 55 to col.2, line 19, see TIA/EIA, page 7-133, lines 24-32).

Regarding claim 22, Jung further teaches a method as recited in claim 18, further comprising the mobile station measuring a pilot signal strength for each of one or more base stations and periodically transmitting one or more pilot strength measurement messages to a network (fig.1-4, 6, col.2, line 3 to col.3, line 67, col.4, line 48 to col.5, line 12).

Regarding claim 23, Jung further teaches a method as recited in claim 22, wherein detecting the mobile station entering or leaving soft handoff comprises identifying a change in a number of base stations in an active set for the mobile station

based on the pilot strength measurement messages (fig.1-4, 6, col.1, line 47 to col.2, line 48, col.4, line 48 to col.5, line 12).

Regarding claim 24, Jung further teaches a method as recited in claim 23, further comprising sending a handoff direction message (HDM) from the network to the mobile station in response to detecting the change in a number of base stations in an active set (fig.1-4, 6, col.2, line 3 to col.3, line 67, col.4, line 48 to col.5, line 12).

Regarding claim 25, Jung further teaches a method as recited in claim 24, wherein modifying the transmission parameter for the mobile station is performed in response to receiving the HDM from the network (fig.1-4, 6, col.2, line 3 to col.3, line 67, col.4, line 48 to col.5, line 12).

Regarding claim 26, Jung further teaches a method as recited in claim 25, further comprising transmitting a handoff completion message from the mobile station to the network after receiving the HDM (fig.1-3, 6, col.1, lines 36-65, col.5, lines 35-67).

Regarding claim 27, Jung teaches a method implemented in a mobile station (fig.1-3) comprising:

detecting that the mobile station is entering or leaving soft handoff (fig..1-3, abstract, col.1, lines 36-65);

if the mobile station is entering soft handoff, setting a transmission parameter to a first value (fig.1-4, col.1, line 36 to col.2, line 19, col.3, line 49 to col.4, line 17); and

if the mobile station is leaving soft handoff, setting a transmission parameter to a second value (fig.1-4, col.1, line 36 to col.2, line 19, col.3, line 49 to col.4, line 17).

Jung fails to specifically discloses the transmission parameter comprises frame size. However, TIA/EIA teaches the transmission parameter comprises a frame size (page 7-133, lines 24-32). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the transmission parameter comprises a frame size as taught by TIA/EIA with Jung teaching in order to reducing the number of soft handoff can lessen the system load and the possibility of handoff in the middle of the target cell it can get an effect of handoff efficiency and raise communication quality.

Regarding claim 28, Jung further teaches a method as recited in claim 27, wherein detecting that the mobile station is entering or leaving soft handoff comprises receiving a handoff direction message (HDM) from the network (fig.1-3, 6, col.1, lines 36-65, col.5, lines 35-67).

Regarding claim 29, Jung teaches a method as recited in claim 27, further comprising measuring a pilot signal strength for each of one or more base stations and periodically transmitting one or more pilot strength measurement messages to a first one of the base stations (fig.1-3, 6, col.6, line 61 to col.7, line 38).

Regarding claim 30, Jung further teaches a method as recited in claim 29, further comprising transmitting a handoff completion message to the first one of the base stations after receiving the HDM (fig.1-3, 6, col.6, line 61 to col.7, line 38).

Regarding claim 32, Jung and TIA/EIA further teaches a method as recited in claim 27, wherein the first value is greater than the second value (see Jung, col.1, line 55 to col.2, line 19, see TIA/EIA, page 7-133, lines 24-32).

Allowable Subject Matter

4. Claims **4, 15, 21, 33** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khai M. Nguyen whose telephone number is 571.272.7923. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George En can be reached on 571.272.7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Khai Nguyen
Au: 2687

2/17/2006

George Eng.

GEORGE ENG
SUPERVISORY PATENT EXAMINER